

What I learned in the ArcMap Training Class

Note: All instructions are based on the Cherryville Thoroughfare Plan files. Each map or study may contain different shapefiles and different fields within those shapefiles. This is to be used as examples only especially since we are no longer creating Thoroughfare Plans.

Setting Up the Page



VERY IMPORTANT, File, Page Setup, Uncheck “Same as Printer”

- Change Orientation to Landscape on Map Size ONLY- don’t worry about Printer setup
- Need to map size. Try to create maps that can be scaled to other useable sizes (all sizes in inches).
 - 11x17 → 22 x 34 → 36 x 55.64
 - 48 x 36 → 14.67 x 11 → 11 x 8.25

Most maps I created are along one of those two scalable sizes. For reports and today, I’ll choose **22 x 34** in order to get 11 x 17, so change the width to 17 and the height to 11

- Uncheck “Scale Map Elements Proportionally to changes in pages”, click ok

All Maps Must have:

- Title
- Scale Bar
- North Arrow
- Date/Creator Info
- Legend
- Border

This information is on the templates that you will use in the future.

Setting Up the Data Frame and Borders for a 34w x 22h Map in Layout View

- Right click on data frame → choose properties → go to the General tab
 - Map Units: feet
 - Display Units: feet
 - Display Units are the units used to measure distances in using the measuring tool. It would fine to change this to miles, km, etc.
- Go to the Coordinate System tab
- Choose Predefined → Projected → State Plane → NAD 1983 Feet → North Carolina 3200
- Go to the Frame tab
 - Border: 3.0 pt.
- Choose Size and Position tab
 - I like to make maps using a grid system in order to get everything to line up correctly
- Click the lower left anchor point box. This is the point of reference that the data frame will be based on when setting the position

- We are trying to make a map with ½ inch margin, therefore what is the lower left anchor point of the data frame? (x=0.5, y=0.5)
Position: X=0.5, y=0.5 Size: width =26, height=21
- Click okay when finished.

To Create a Box that Houses the Map Text

- Draw a new rectangle that house the legend and all other info
Click on the rectangle at the bottom of the page.
- Right click → Properties (Size and Position tab), make sure the lower left anchor pt is selected
Position: x=26.5, y=.5 Size: width =7, height =21
- Symbol Tab
Fill Color: No Color Outline Color: black, width=3.0
- Click okay when finished

To a Create line that Separates the Map Text from the Legend

- Draw New Line and double click to end the line drawing.
Click on the rectangle ↓ to the line symbol.
- Right click → Properties (Size and Position tab), make sure the lower left anchor pt is selected, x=26.5, y=10, width=7, height=0 (or greyed out)
- Symbol, color should be black with thickness of 3.0
- Click okay when finished

To Add Text to Map

- Add text using the Text tool (click on the **A** at the bottom of the page), type the text “FIGURE 9” (it is tiny)
 - Right click → Properties (Size and Position tab)
 - Set anchor point to bottom center, x = 30, y=8.5
- Note: Whenever you change anchor point, it changes for all elements
- Change font to Arial 28, bold, and centered
 - Click okay when finished

Create the Following Text for the Map:

Text	Arial Bold Font Size	x	y
FIGURE 9	28	30	8.5
ENVIRONMENTAL DATA	42 (hit enter)	30	7
CITY OF	20	30	6.25
CHERRYVILLE	42	30	5.5
GASTON COUNTY	20	30	4.75
NORTH CAROLINA			
PREPARED BY THE	12	30	4.1
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	16	30	3.5
STATEWIDE PLANNING BRANCH			
INCOOPERATION WITH	12	30	3.1
US DEPARTMENT OF TRANSPORTATION	16	30	2.5
FEDERAL HIGHWAY ADMINISTRATION			

To Insert Scale Bar

- Insert → Insert Scale Bar → Alternating Scale Bar 1
- Click on Properties
 - Divisions: 4
 - Subdivisions: 2
 - When resizing: adjust width
 - Division value: 1600 ft
 - Gap = 6pt
- Click on the Format tab
- Size = 16, bold
- Click okay when finished
- Right click on the selected scale bar that is very small.
- Properties → Click on the Size and Position Tab
 - Position: X=30, y=1.3
- Click okay when finished
 - The scale will get larger when the layers are placed into the layout.
- Base Map Date: Arial 12, bold, x=30, y=.75

To Insert North Arrow



- Insert, Insert North Arrow → North #7
- Click okay when finished
- Right click on north arrow → Properties → Click on the Size and Position Tab
 - Position: x=30, y=19.25
- Click okay when finished
- Save Map- Name it Figure Layout

Add the following layers and set to this order in TOC

- Zoom to Cherryville (NW Gaston County)
- Set scale to 1:18:500; just type in box at top
- Click on Selection → Select by attributes
 - Layer: County Boundary
 - Method: create a new selection
 - Double click "Co_Name"
 - Single click =
 - Double click 'Gaston' and click okay
- Right click on county boundary → selection → zoom to selected features

CBAR:

Right click on layer → properties → Click on the symbology tab → click on symbol → Properties → Outline → Properties

Continued on other page...

Type: Cartographic Line Symbol

Click on the template tab

Drag the boxes to have 4 Black, 2 white, 1 black, 2 white, 4 black

Interval=2

Click on the cartographic line tab → Width=3 pt, black

Rivers: blue

DOT_Routes:

Click on the symbology tab → under Show: click on Categories → Unique Values

Value Field: type

Click on Add Values... → Click on complete list → select them and click okay

NC Routes: width=3pt, black

SR Routes: 50%grey, width=1pt

Local: 40%grey, width=1 pt

Uncheck all other values

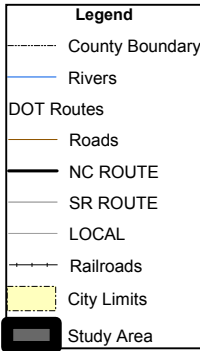
Railroads: black, railroad symbol, width=4pt

Study Area: Grey 60%, width=12pt

Right click → zoom to layer

City Limits

- Add the city limits to the map
For city limits, we only want to show Cherryville
- Properties → Definition Query Tab
- Definition Query → click on Query Builder...
- Double click "MB_Name", single click =, click [complete list], double click 'Cherryville'
It should look like "MB_NAME" = 'Cherryville'
Click verify to see if the expression is correct and then click okay.
- Click okay.
- Click on the Symbology tab → click on the symbol
Fill color: yucca yellow
- Click properties → outline button → properties
Type: Cartographic Line Symbol
Line Joins: Round
Color: black, width: 1.0
- Go to Template tab → drag grey strip
- 6 black, 2 white, 2 black, 2 white
- Ok all the way back
- Right click on city limits in Table of Contents....save as layer file, which saves the color scheme



To Create a Legend

- Insert → Insert Legend
- Click next → LEGEND size: 30, click so it is centered
- Click next to the bitter end
- Move Legend to appropriate space
- Right click on the legend → Properties → Size and Position Tab
Size: x=30, y=11.75
- Legend Tab
Spacing between: All spacing = 12
- Symbol button: Symbol Size = 16 Bold, (Style, Properties, Label Symbol)
- Items Tab → Put Layers in Correct Order by selecting the layer and using the arrow buttons
- Click okay when finished.
- Right click on the legend → properties → items tab
- Highlight the DOT Routes → click style... → properties → uncheck show heading
- If you click on label symbol under the show labels title, you can change the font size and style.
- Click okay until you are out of the legend.

Creating NC Route Symbol



Select the text

Right click → properties → the change symbol...button → keep going....

Properties → click on the Advanced Text tab → ☉ text background → click properties →

Change Type to Marker text background → Symbol → properties

Type: Character marker symbol

Font: change to ESRI Hazardous materials

Index: #37 for diamond

Size: 40

Color: change to white

Click on the plus sign found in the bottom left corner area

Type: Character marker symbol

Font: change to ESRI Default Marker

Index: #34 for box

Size: 44

Color: black

Click on the ↓ to move the box to the bottom so that the white is on top.

Click okay until you get to the Editor box.

Click on the General tab.

Text size: 12

Vertical Alignment: Center

Horizontal Alignment: Center

Click okay until the windows go away.

Short cut method:

Select the text

Right click → properties → the change symbol...button → more symbols → add →

Go the S:\Comprehensive Transportation Plan\Comprehensive Transportation Plan.styles

Click on the .styles file → scroll down and click on the NC symbol

Click okay until the windows go away

Save as Cherryville Base Map

For Environmental Map, add the following layers:

Surface Water Intakes

NPDES-Non Discharge Systems

Natural Heritage Occurrence Sites

Wetland Streams (nwi-arcs)

Land Water Conservation Fund

Wetlands (nwi-pls)

Groundwater Recharge/Discharge Areas

High Quality Water Zones

Water Supply Watersheds